In the Claims

We claim:

Claims 1-70 (Canceled)

Claim 71 (New): A method of controlling a pest wherein said method comprises applying to the pest, or to a pest-inhabited locus, a pesticidally effective amount of transformed cells expressing a polynucleotide encoding a pesticidal polypeptide, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24, and wherein the pest ingests the pesticidal polypeptide.

Claim 72 (New): The method of claim 71, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 73 (New): The method of claim 71, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO. 4.

Claim 74 (New): The method of claim 71, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 75 (New): The method of claim 71, wherein the pesticidal polypeptide is a fusion polypeptide.

Claim 76 (New): The method of claim 75, wherein the fusion polypeptide is a multimer of the amino acid sequence.

Claim 77 (New): The method of claim 71, wherein the cells are pest food cells comprising the polynucleotide encoding the pesticidal polypeptide.

Claim 78 (New): The method of claim 71, wherein the pesticidal polypeptide inhibits synthesis of a digestive enzyme within the pest.

Claim 79 (New): The method of claim 71, wherein the cells are algae cells.

Claim 80 (New): The method of claim 71, wherein the cells are a *Clorella* species.

Claim 81 (New): The method of claim 71, wherein the cells are yeast cells.

Claim 82 (New): The method of claim 71, wherein the cells are applied in a living state.

Claim 83 (New): The method of claim 71, wherein the cells are applied in a non-living state.

Claim 84 (New): The method of claim 71, wherein the cells are applied as a component of a pesticidal composition which also comprises a pesticidally acceptable carrier.

Claim 85 (New): The method of claim 71, wherein the pest utilizes a serine esterase as a digestive enzyme.

Claim 86 (New): The method of claim 71, wherein the pest utilizes trypsin as a digestive enzyme.

Claim 87 (New): The method of claim 71, wherein the pest is selected from the group consisting of coleopterans, lepidopterans, and dipterans.

Claim 88 (New): The method of claim 71, wherein the pest is a blood-sucking pest.

Claim 89 (New): The method of claim 71, wherein the pest is of the suborder Nematocera.

Claim 90 (New): The method of claim 71, wherein the pest is a pest of the family Colicidae.

Claim 91 (New): The method of claim 71, wherein the pest is a dipteran.

Claim 92 (New): The method of claim 71, wherein the pest is of a genus selected from the group consisting of *Heliothis*, *Culex, Theobaldia, Aedes, Anopheles, Forciponiyia, Culicoides* and *Helea*.

Claim 93 (New): The method of claim 71, wherein the pest is selected from the group consisting of mosquitoes, flesh flies, fleas, sand flies, house flies, and dog flies.

Claim 94 (New): The method of claim 71, wherein the pest is a mosquito.

Claim 95 (New): The method of claim 71, wherein the pest is of a species selected from the group consisting of: *Aedes aegypti, Culex quinquefasciatus, Anopheles albimanus, Anopheles quadrimaculatus, Lutzomyia anthrophora, Culicoides variipennis, Stomoxys calcitrans, Musca domestica, Ctenocephalides felis,* and *Heliothis virescens*.

Claim 96 (New): The method of claim 71, wherein said method comprises applying the cells to a pest-inhabited locus.

Claim 97 (New): The method of claim 96, wherein the pest-inhabited locus is a body of water.

Claim 98 (New): The method of claim 71, wherein the cells are applied in association with a pest food.

Claim 99 (New): A method for preparing a pesticidal composition comprising transforming a host cell with a polynucleotide encoding a pesticidal polypeptide and bringing the transformed host cell into association with a pesticidally acceptable carrier wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 100 (New): The method of claim 99, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 101 (New): The method of claim 99, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 102 (New): The method of claim 99, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 103 (New): The method of claim 99, wherein the pesticidal polypeptide is a fusion polypeptide.

Claim 104 (New): The method of claim 103, wherein the fusion polypeptide is a multimer of the amino acid sequence.

Claim 105 (New): An expression vector comprising a promoter and a polynucleotide encoding a pesticidal polypeptide wherein the promoter has the capacity to control expression of the pesticidal polypeptide in a host, and wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 106 (New): The expression vector of claim 105, wherein said pesticidal polypeptide comprises the amino acid of SEQ ID NO:3.

Claim 107 (New): The expression vector of claim 105, wherein said pesticidal polypeptide comprises the amino acid of SEQ ID NO:4.

Claim 108 (New): The expression vector of claim 105, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 109 (New): The expression vector of claim 105, wherein said pesticidal polypeptide is a fusion polypeptide.

Claim 110 (New): The expression vector of claim 109, wherein said fusion polypeptide is a multimer of said amino acid sequence.

Claim 111 (New): A transformed cell comprising a polynucleotide encoding a pesticidal polypeptide, wherein said cell expresses said polynucleotide to produce said pesticidal polypeptide, and wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID

NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 112 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 113 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 114 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:6.

Claim 115 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:8.

Claim 116 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:10.

Claim 117 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:12.

Claim 118 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:14.

Claim 119 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:16.

Claim 120 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:18.

Claim 121 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:20.

Claim 122 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:22.

Claim 123 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:23.

Claim 124 (New): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:24.

Claim 125 (New): The transformed of claim 111, wherein the pesticidal polypeptide inhibits synthesis of an insect digestive enzyme.

Claim 126 (New): The transformed cell of claim 125, wherein the digestive enzyme is a serine esterase.

Claim 127 (New): The transformed cell of claim 111, wherein the transformed cell is a pest food.

Claim 128 (New): The transformed cell of claim 111, wherein the transformed cell is mosquito larvae food.

Claim 129 (New): The transformed cell of claim 111, wherein the transformed cell is an algae cell.

Claim 130 (New): The transformed cell of claim 111, wherein the transformed cell is a green algae cell.

Claim 131 (New): The transformed cell of claim 111, wherein the transformed cell is a *Clorella* species.

Claim 132 (New): The transformed cell of claim 111, wherein the transformed cell is a yeast cell.

Claim 133 (New): A pesticidal composition comprising: transformed cells expressing a polynucleotide encoding a pesticidal polypeptide, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24; and a pesticidally acceptable carrier.

Claim 134 (New): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 135 (New): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 136 (New): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 137 (New): The pesticidal composition of claim 133, wherein said composition is in a form selected from the group consisting of pellets, briquettes, bricks, powders, granules, sprays, solutions and capsules.

Claim 138 (New): The pesticidal composition of claim 133, wherein said composition is formulated to float on an aqueous medium.

Claim 139 (New): The pesticidal composition of claim 133, wherein said composition is formulated to maintain a depth of 0 to 2 feet below the surface of an aqueous medium.

Claim 140 (New): The pesticidal composition of claim 133, wherein said composition is formulated to sink in an aqueous medium.